

CONCLUSION

With this amendment, claims 1-60 are pending. Claims 1, 5, 8, 11, 14, 20, 27, 42, 46, 49, 52, 53, and 55 have been amended.

Should any fees under 37 CFR 1.16-1.21 be required for any reason relating to the enclosed materials, the Commissioner is authorized to deduct such fees from Deposit Account No. 10-1205/TDCO:006. The examiner is invited to contact the undersigned at the phone number indicated below with any questions or comments, or to otherwise facilitate expeditious and compact prosecution of the application.

Respectfully submitted,



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**APPENDIX**

**MARKED UP VERSION OF AMENDMENTS  
AS REQUIRED BY RULE 121**

**In The Claims:**

1. (Once amended) A [First-arriving] first-arriving pulse detector circuitry,  
comprising:
  - a correlator circuitry configured to correlate a received signal with a template  
signal to provide an output signal; and
  - a threshold circuitry configured to provide a first-arriving-pulse signal depending  
on the relative values of the output signal of the correlator circuitry and a  
threshold signal derived from a noise floor.
5. (Once amended) The circuitry of claim 4, in which the first-arriving-pulse signal  
tends to indicate [the] a time position of a first-arriving pulse in the received signal.
8. (Once amended) The circuitry of claim 7, in which the first number comprises the  
average of [a] the noise floor, the second number comprises the standard deviation of the  
noise floor, and the third number comprises a scaling factor.

11. (Once amended) A radio-frequency (RF) apparatus, comprising:
- a radio-frequency circuitry configured to receive a plurality of pulses that result from a transmission of a radio-frequency pulse in a multipath propagation medium; and
- a detector circuitry configured to discriminate from a noise floor a first-arriving pulse in the plurality of pulses.
14. (Once amended) The apparatus of claim 13, [in which the detector circuitry is further configured to provide a] wherein the first-arriving-pulse signal [that] tends to indicate [the] a time position of the first-arriving pulse in the plurality of pulses.
20. (Once amended) A communication system, comprising:
- a transmitter circuitry configured to transmit a radio-frequency pulse into a multipath propagation medium;
- a receiver circuitry configured to receive a plurality of pulses that result from the transmission of the pulse into the multipath propagation medium; and
- a detector circuitry configured to [detect the] discriminate from a noise floor a first-arriving pulse of the plurality of pulses.

27. (Once amended) The system of claim 26, [in which the detector circuitry is further configured to provide a] wherein the first-arriving-pulse signal [that] tends to indicate [the] a time position of the first-arriving pulse in the plurality of pulses.

42. (Once amended) A method of detecting a first-arriving pulse, comprising:  
correlating a received signal with a template signal by to provide a correlation  
output signal; and  
comparing the correlation output signal and a threshold signal to provide a first-  
arriving-pulse signal,  
wherein the threshold signal is derived from a noise floor.

46. (Once amended) The method of claim 45, in which the first-arriving-pulse signal tends to indicate [the] a time position of a first-arriving pulse in the received signal.

49. (Once amended) The method of claim 48, in which the first number comprises the average of [a] the noise floor, the second number comprises the standard deviation of the noise floor, and the third number comprises a scaling factor.

52. (Once amended) A method of detecting a first-arriving pulse among a plurality of pulses, comprising:  
transmitting a radio-frequency pulse in a multipath propagation medium;

receiving, by using a radio-frequency circuitry, the plurality of pulses that result from the transmission of the radio-frequency pulse; and  
discriminating from a noise floor a first-arriving pulse in the plurality of pulses [,]  
by using a detector circuitry[, a first pulse in the plurality of pulses from a noise floor].

53. (Once amended) The method of claim 52, in which using the detector circuitry further comprises correlating the plurality of pulses with a template signal to provide a[n] correlation output signal.

55. (Once amended) The method of claim 54, which further comprises using the detector circuitry to provide a first-arriving-pulse signal that tends to indicate [the] a time position of the first-arriving pulse in the plurality of pulses.